Amendments to the Claims:

Please amend claims 1-3, 5-6, 8-11 and 17 and cancel claim 4 as indicated below. This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

- 1. (Currently Amended) A circuit for generating a reference current, comprising:
 - a positive feedback loop coupled with a floating current mirror; and
 - a negative feedback loop diverting current from the floating current mirror,

wherein the circuit operates with a minimum supply voltage of approximately the sum of a transistor threshold voltage plus three drain saturation voltages.

- 2. (Currently Amended) The circuit of claim 1, where the negative feedback loop diverts current directly from the floating current mirror.
- 3. (Currently Amendedl) The circuit of claim 1, where the negative feedback loop diverts current from the floating <u>current</u> mirror by using a voltage follower.
- 4. (Canceled)
- 5. (Currently Amended) The circuit of claim 1, wherein the <u>floating</u> current mirror includes a pair of p-channel transistors.
- (Currently Amended) A method for providing a current reference, comprising:
 providing a current mirror circuit portion;

providing a positive feedback loop portion coupled with the current mirror <u>circuit portion;</u> [[and]]

providing a negative feedback loop portion diverting current from the floating current mirror circuit portion; and

operating the current reference with a minimum supply voltage of approximately the sum of a transistor threshold voltage plus three drain saturation voltages.

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- 7. (Original) The method of claim 6, wherein the operation of providing the current mirror circuit portion includes providing a pair of p-channel transistors.
- 8. (Currently Amended) The method of claim 6, wherein operation of providing the negative feedback loop portion includes diverting current directly from the floating current mirror circuit portion.
- 9. (Currently Amended) The method of claim 6, wherein the operation of providing the negative feedback loop portion includes providing a control of a common voltage of the current mirror circuit portion.
- 10. (Currently Amended) A circuit providing a current reference, comprising:

a <u>floating</u> current mirror including a first transistor and a second transistor;

at least one resistor defining a voltage node;

a pull-down transistor; and

an output transistor;

wherein the first transistor is coupled with the at least one resistor and provides an amount of current thereto;

wherein the second transistor is coupled with the output transistor for providing a bias signal to the output transistor; and

wherein the amount of current provided by the first transistor into the at least one resistor is mirrored to the second transistor.

- 11. (Currently Amended) The circuit of claim 10, wherein the pull-down transistor has one end coupled with the <u>floating</u> current mirror and a gate coupled with the voltage node, so as the amount of current provided by the first transistor increases, the pull-down transistor diverts an amount of current received by the first transistor.
- 12. (Original) The circuit of claim 10, wherein the first and second transistors are p-channel MOSFETS.

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- 13. (Original) The circuit of claim 10, wherein the amount of current mirrored to the second transistor provides a bias signal to the output transistor.
- 14. (Original) The circuit of claim 10, wherein the circuit operates with a minimum supply voltage of approximately the sum of a transistor threshold voltage plus three drain saturation voltages.
- 15. (Original) The circuit of claim 10, wherein the pull-down transistor is an n-channel MOSFET.
- 16. (Original) The circuit of claim 10, wherein the output transistor is an n-channel MOSFET.
- 17. (Currently Amended) The circuit of claim 10, further comprising:

a protection transistor coupled between the pull-down transistor and the <u>floating</u> current mirror.

- 18. (Original) The circuit of claim 17, wherein the protection transistor is a p-channel MOSFET.
- 19. (Original) The circuit of claim 10, wherein a load is coupled to the output transistor, the load receiving the current reference.